W1TK

The Spark Gap

SEPTEMBER 1979

BOOK V VOL IX

Official Journal of the Wellesley Amateur Radio Society

Well, the summer is now just about over, and it's time to get the activities of the Wellesley Amateur Radio Society back into full swing again. Not that the summer was totally idle, there was of course Field Day, the June VHF contest, the picnic, and a couple of meetings to keep people busy. As detailed inside, the contests were very successful. The picnic on July 15 t Auburndale park in Newton was not so successful due to the weather, but by the time you read this, hopefully the makeup date of August 26 will have resulted in good weather and another successful trip to the softball diamond against the Middlesex club.

The club year once again will be a busy one, with all the usual events of the past, and some new ones. Details are still being worked out by the executive committee. If you would like to add your ideas, please come to the next executive committee meeting to be held at the club on Saturday, September 8th at 7:30 pm. These meetings are always open to anyone in the club. Also on tap that evening will be the conclusion of the budget discussion.

A Novice class is definitely set for the fall, to be taught by David Curry, K1TK. He intends to make this one a little different from those of the past, in that the students will have the opportunity to gain some practical electronics knowledge in the course by building a QRP rig for themselves. If you know of anyone interested in this course, have them contact David for details at 237-2450.

The first meeting of the year will be held September 20, with discussion and voting on the budget, and details on the club activities for the upcoming year. Hope to see you there!

Once again, I would like to encourage you to take some time off the radio and put your thoughts down on paper for the Spark Gap. We are always in need of articles on anything you might have to say about the club or any part of ham radio. You certainly don't have to be an expert writer, just put down your thoughts and your fellow club members will undoubtedly enjoy them. You might even get a wider audience; several Spark Gap articles during the past year were picked up by national ham publications!

The help of the following people is greatly appreciated in their contributions of articles to the Spark Gap during the 1978/79 club year:

George Young, WA1YAU, Mike Adlerstein, K1FB, Bill Hanlon, N1ADY, Jim Hatherley, WA1TBY, Bill Downing, WA1PQY, Pete Spotts, N1ABS, Pete Bradley, N1ADX, Bob Rudko, W1HSS, and of course, the mysterious WE/ARY. Special note should be made of the efforts of K1FB and WA1YAU for their contribution of monthly columns. □

Dues Dues Dues...

Yes, that time of year is about upon us again. However, under the new constitution, the dues are set according to the yearly budget, after it is approved at a regular club meeting. The budget meeting will be held on September 20, and dues will be due and payable 30 days after that. Anyone not paying within this 30 day period will be dropped from the club roster. Due to a number of issues and the greatly increased cost of running the Spark Gap, it is likely that the dues will change. Thus it is most important that you attend the budget meeting and vote on the budget for the upcoming year. □

MEETINGS THIS MONTH:

September 20, 1979 at 7:30 pm

Intermediate Bldg., Wellesley Hills, Mass.

THE LURE OF RADIO

Musings by Hiram Percy Maxim, W1AW

What peculiar force is it that affects alike the boy of 16 and the man of 70? The wealthy man and the poor man? The college graduate and the uneducated boy? What is it about their common interest that can bind together such diversified classes and types?

Perhaps the 'urge for distance' has something to do with it. Perhaps the pleasures that come from friendships made over the air. However, there is something bigger that constitutes the charm of Amateur Radio--the Spirit of Adventure!

Many a time, as I have sat down before my own set, I have paused to wonder where my signals would go and into what countries of the world they would carry my thoughts. Each night has been an adventure into space. No two nights are the same...

What of the future?...To me, Amateur Radio has a more important destiny to fulfill than mere scientific attainment and that destiny is the furtherance of world peace. □

(from "The Story of Radio",
by Orrin Dunlap, 1927)

OFFICIAL BULLETIN

Nr 75, dated August 7, 1979:
The new edition of the ARRL Net Directory is now available. Listing over 700 public service nets by location and frequency, this newly revised booklet is also packed with information on all the basics of traffic handling and net operation. You may obtain a copy by sending a self-addressed nine by twelve inch envelope with 41¢ postage to ARRL Net Directory, 225 Main Street, Newington, Conn. 06111. □

hr REPORT

The FCC's operations and management have been strongly criticized in an as yet unreleased report by the General Accounting Office. Tuesday's Washington Star reported on the GAO findings, which had been prepared for Sen. Hollings, chairman of the Senate Communications Subcommittee. The document is causing much concern among the FCC's top echelons.

Lack of planning was one of the GAO's chief criticisms, and the commissioners now expect to spend the early part of September outside Washington reviewing a series of plans recently prepared by each of the various bureaus. The GAO also recommended reducing the number of commissioners from the present seven to five, but providing each of the five with a larger staff.

A bigger budget is one FCC answer to the GAO criticism, the August 2 issue of Electronics magazine reports in its "Washington Newsletter" column. According to Electronics, the FCC will seek a 12% increase for its fiscal 1981 budget to increase staff and other resources to counter GAO complaints.

hr Report, August 3, 1979□

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Rules regulating electro-magnetic compatibility (EMC) for West Germany have been issued by the Deutsche Bundespost. The comprehensive new rules, which define the rights of bc listeners and those who operate transmitting stations, are scheduled to go into effect July 1, 1981.

Both receiver performance and receiving conditions are taken into account under the new German rules. Entertainment receivers must be able to reject specified levels of unwanted signals at their antenna terminals, or power lines and interconnecting leads or cables, or direct from nearby fields. In addition, the actual strength of the desired signal must be above specified minimums (depending on frequency and service) or a complaint of interference will not be accepted.

RFI to non-radio devices such as tape recorders or electronic organs is not covered under the new regulations, which apply only to radio receivers. Neverless, the new German rules appear to be a firm move in a positive direction as RFI complaints and EMC problems continue to increase. Tnx DF1F

hr Report, August 10, 19

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

EDITOR-IN-CHIEF: NELS J. ANDERSON, K1UR
32 WESTGATE ROAD, APT. 6
CHESTNUT HILL, MASS. 02167

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS $5. THE CLUB YEAR RUNS FROM SEPTEMBER 1 - JUNE 30. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181

Minutes

Meeting of July 19, 1979:

The meeting was opened at 8:22 pm by Bill Downing, WA1PQY.

A report of Field Day was given, with the report that we made more contacts than ever before.

David Curry, K1TK, proposed that the club spend $17.50 to get 63/03 crystals for the old tube rig he owned, and which he was willing to leave at W1TKZ for club use, since the club currently owns no 2 meter rig. The proposal was passed.

A report was given on the progress of the 450 MHz control link for the repeater. The transmitter strips were received and assembled, one touch-tone pad had been purchased, and the crystals were on order. For the repeater site, a receiver and antenna had been purchased, for a total cost of $174.

K1TK announced that several members had started a certificate to encourage activity on the 63/03 repeater. The basic certificate requires 3 contacts on 03.

Dick Paret, WA1ZLQ, gave a station manager's report on the repairs to the station console.

The meeting was closed at 9:19 pm.□

Executive Minutes

Meeting of August 11, 1979:

The meeting was opened at 7:40 pm by Bill Downing, WA1PQY. He began the meeting with the announcement of his selections for the club's appointed offices (printed below).

The remainder of the meeting was devoted to the budget for the upcoming year. This was not concluded, and will be continued at the next executive committee meeting on September 8th. The meeting was closed at 11:20 pm. □

OFFICERS

PRESIDENT:
Bill Downing, WA1PQY, 235-4484
VICE PRESIDENT:
Nels Anderson, K1UR, 323-5029
CORRESPONDING SECRETARY:
Bill Hanlon, N1ADY, 384-8056
RECORDING SECRETARY:
George Young, WA1YAU, 237-2082
TREASURER:
Jim Hatherley, WA1TBY, 254-6042
OPERATING ACTIVITIES:
Joe McGrath, WA1JIR, 435-6893
FUND RAISING:
Kevin Kelly, WA1YHV, 242-0341
EDUCATION:
Dick Magnanti, WB1BUQ, 235-6371
EMERGENCY COORDINATOR:
Don Chesley, WA1HVS, 655-5211
STATION MANAGER:
Dick Paret, WA1ZLQ, 762-5074
EQUIPMENT MANAGER:
C.J. McDonald, WB1BUM, 332-6091
TRUSTEE:
Lud Fasolino, K1LF, 237-0316
REPEATER COMMITTEE:
David Curry, K1TK, 237-2450
Bill Downing, WA1PQY, 235-4484
Scott Nacey, WA1YOJ, 235-1599
Dick Paret, WA1ZLQ, 762-5074

History Of 63/03

by David Curry, K1TK

Several months ago the Wellesley Amateur Radio Society purchased the 63/03 repeater. Although many people know that the machine exists, not many know the history of it.

Approximately two years ago, four members, WA1PQY, WA1YOJ, WA1YHT, and myself decided we would like to put up a two meter repeater. Our first attempt utilized what many of you know as "the bomb", a pre-1955 commercial truck radio. At that time, the repeater was situated at my house just off Route 9, using one quarter wave antenna in a tree and another on the ground across the yard (needless to say, my mother loved this). The coverage area then reached almost half way across town, but we were not discouraged. Then in February of the following year, thanks to some much needed financial assistance by WA1PQY, a Motorola Compa-Station was purchased. The Compa-Station is actually a remote base station, but is ideally suited for conversion to a repeater. The transmitter normally runs about seven watts, but can run up to 60 watts if the duplexers can be adjusted better. At first, the repeater frequency chosen was 147.705/105. This proved unusable because of a repeater in Rhode Island on the same frequency. The repeater was then moved to 147.63/03 after the Marlboro club left the split vacant.

Work was then begun on the control circuitry; a homebrew COR and I.D. were built and are still in service today. The I.D., basicly a stripped down version of an accu-memory, has the capability to be reprogrammed at any time.

Thanks to the efforts of WB1BUM, the next major hurdle was overcome with the addition of a set of six cavity duplexers to eliminate the need for two separate antennas. Duplexers provide the isolation between the receiver and the transmitter so that they both use the same antenna.

About the same time negotiations were begun to provide a permanent site for the repeater. Due to our efforts during the Great Blizzard, the Newton-Wellesley Hospital people were quite receptive to the idea of our repeater being in their building. During that summer and the fall our antenna was put up at its present height of 40 feet above the roof of the hospital. This is in addition to the 100 foot height of the roof, puts the antenna, a Ringo Ranger, a respectable 140 feet above ground level.

That brings us up to the present conversion from phone line control to the 450 MHz control which should be about complete at the time of printing. This consists of a scanner receiver and Ringo Ranger antenna at the hospital and control transmitters at the control operators' stations capable of transmitting tones to control the repeater functions. □

F.D.

by Bill Downing, WA1PQY

This year's Field Day was certainly an ambitious one. The site was as far afield as any locale that had been selected in the history of the Wellesley Amateur Radio Society. And yet, with relatively few problems, everyone can attest to having a good time.

A group of 10-15 members left for Martha's Vineyard on Friday, regrouped at Wood's Hole, crossed by 45 minute ferry ride to Vineyard Haven, and arrived at Peaked Hill, Chilmark around 5 pm. The view at the top of Peaked Hill revealed at least half of the island, complete with crashing surf and the surrounding ocean. The two meter quagi was erected and we called it a day.

The rest of the group arrived Saturday morning. We set up two tribanders on towers, a six meter beam, a four element 40 meter inverted vee beam, and 80 meter dipole. We even planned to put up a 160 meter antenna but lacked coax, rope and space. Impressive? You bet!

Contest operations continued from Saturday to Sunday afternoon, and resulted in our best contest effort in recent years. The final tally showed 1019 QSO's, with about half on phone and half on CW. Virtually all bonus points were received as well, including all emergency power, message orig-

ination, publicity, and OSCAR contact.

The generator purred flawlessly, thanks to a good maintenance program undertaken by Roger Wilmarth. Unfortunately, one of the trailer tires went flat, but was repaired in short order.

Members from time to time took advantage of the island's resources to take side trips to the beaches, the Gay Head cliffs, and other popular attractions. Mother Nature was kind to all weather-wise.

We all left at various times on Sunday afternoon and arrived back in Wellesley about 9 pm. There are those who felt that a long distance expedition for such a large group would be impossible to pull off, but I think the participants will agree that it was well worth the effort. □

"timeout!"

By Mike Adlerstein, K1FB

Anyone who works DX knows that at any given hour of the night there are people somewhere in the world screaming into their microphones. These people are not insomniacs; for them the sun is high overhead.

We are all familiar with the time zone system which was adopted in 1883 by the principal railways of the U.S. and Canada. Since then they have come to be used generally around the world. By convention, the universal time is taken to be the hour at Greenwich, England. The local time at any other point on the earth is obtained by counting the number of multiples of 15 degrees longitude from Greenwich. Correction for such things as daylight savings time (add one hour) may be made to determine the precise local hour.

One area which tends to confuse many people is the function of the international date line. This might warrent some explanation. The need for it is clear when one considers that at any given moment, there is a longitude on earth where the local time is 12 midnight (2400 hours). To the west it is, for example Monday, to the east of this longitude it is Tuesday. Since Monday has 24 hours you could continue to travel westward and never run out of Monday's hours. In fact, there would be no room on earth for Tuesday. But you know that Tuesday exists since it was just to the east of where you started from! Hence, there must be some place else on earth where Monday disappears and Tuesday starts. This is the international date line which runs through the center of the Pacific Ocean and swallows up Monday like a big slit in the earth. As Monday is fed into the slit from the east, Tuesday emerges from it and heads to the west. Only when midnight crosses the international date line is the entire world living on the same day of the week. This momentus event occurs at 1200 Greenwich mean time (or 0700 Eastern Standard time).

All this may be a bit clearer to you if you draw a polar projection of the earth with the international date line as a line from the center of the circle to the rim; trace the progress of a day around the map.

If you are still confused, just ask the next DX station you contact to explain it. You'll find you are not alone in your confusion. □

FROM THE MAILBAG

June 17, 1979

Gentlemen:

I was a member of the license class of 1979, conducted by Mr. William Hanlon, N1ADY, who taught technical and regulatory matters, and Mr. Richard Magnanti, WB1BUQ, who covered code and other supplementary aspects.

The training course was well-organized and very well run in a relaxed atmosphere, and the instructors were enthusiastic, patient and thorough.

I am pleased at age 66 to have received my Novice license, which in retirement, will open to me an alternative interest involving mental activity as physical activity decreases.

This fine service was deeply appreciated.

Very truly yours,
Thomas M. Burton, KA1DHM

Hurricane Bob

Amateur Radio Meets Maritime Emergency

by Pete Bradley, N1ADX

While listening to the 20 meter Amateur phone band on the 10th of July 1979, I heard not one, but three separate distress calls. Hams were providing emergency communications between the U.S. Coast Guard and the sailing vessels. When I started to monitor 14.313 at 2200Z, the Intercon (Maritime Mobile) net had been talking to the yacht Kismet for several hours. Her crew lost their way in the Gulf of Mexico and they were sailing into the path of tropical storm Bob.

W4PPC passed instructions to N5BJV/marine mobile on the Kismet. Information was relayed to the Coast Guard by landline. Coast Guard aircraft were trying to sight the yacht while the Coast Guard cutter Acrisnet was diverted to help. At one point the net requested accurate beam headings from hams in North and South America to help locate the Kismet. At other times both the Coast Guard at New Orleans and the cutter Acrisnet came up on the frequency to ask for information or to pass data from the National Weather Service.

At 2224Z the net smoothly and competently acknowledged a mayday from the sailing vessel Impossible Dream. She was demasted, out of fuel, and in an Atlantic storm. There were three people on board. With K3QQN/4 and W2ZFS acting as relay, the Impossible Dream moved to 14.305. The Coast Guard at San Juan handled this emergency. All stations returned to the net frequency one hour later.

At 2340Z back on 14.313 the net was calling the storm a hurricane. The Kismet was now thought to be at 88.8W and 25.9N. They were having difficulty steering the course recommended by the Coast Guard due to their proximity to Hurricane Bob. Altogether, I was impressed by the way in which the net was able to help the two yachts. Although the sailors were suffering serious storm weather and other discomforts, they were also in touch with the authorities and with their families. The Coast Guard had been quickly informed and vital and personal information had been passed efficiently. Both vessels later reported that they were not in any immediate danger, and everyone concerned with providing communications had reason to be pleased with themselves.

Then at 0142Z I heard a single strong "SOS" on frequency sent by CW. This was followed a little later by a weaker SOS and message from the vessel Akerolis signing KC3OY. NCS was drowned out as everyone started talking at once. It was many minutes before order was restored and one station was given the task of calling the Akerolis on SSB. The vessel reported a bad engine, no sail and the position of 78W and 24N. They had been adrift for three hours and there were five people on board. The name of the boat was spelled more than one way, and in answer to the question "what is your port of registry?" she answered "Port-au-Prince". Several of the questions were first answered by "?" as though the Akerolis had difficulty understanding or copying the questions. For example, she might have thought that her destination was required. Having reported her situation, she left the air.

Subsequent discussion on the net suggested that this third call for help was a hoax. The following reasons were offered:

1. The first "SOS" was loud, but this could have been a stateside ham alerting the net to a weaker CW signal.
2. Why did he not use a microphone? Perhaps he did not have one!
3. No one could find any record of KC3OY being issued by the FCC. I hope that the lists are up-to-date.
4. He did not acknowledge calls from hams or from the Coast Guard station NMN. Of course, he might have left to work on the engine.
5. He did not know how to spell the name of his vessel. He was operating under pressure and may not use CW very often.
6. He did not answer all the questions put to him. Perhaps he did not understand English very well. Anyway, have you tried to copy SSB on a basic CW receiver? My own home transceiver receives LSB (i.e. the wrong sideband) when operating in the CW mode on 20
7. His vessel did not seem to be reg-

istered in Haiti, but I hope that he understood that question.

I listened to the net frequency for several hours and I came away a wiser ma I heard at first hand how Amateur radio can provide a unique and efficient service to comfort and help people in trouble. I now have some insight into how the professionals of the Coast Guard operate to save lives at sea. The hams passed messages between the Coast Guard units, between the yachts and the Coast Guard, and put the crews of those yachts in touch with their families. Before the net returned to routine traffic handling at 0237Z both the Kismet and the Impossible Dream reported that they were not in imminent danger. In the case of the third call for help, the net had passed their information to the Coast Guard, and hams in Haiti were looking for registration information on the Akerolis. However, when the SOS was first received the NCS or a designated realy station should have been the only station to transmit. Instead, many minutes were lost while everyone talked at once. I hope that those hams now understand the importance of staying quiet unless called on by the NCS. Hams who came on to 14.313 during the emergency and asked "is this frequency in use?" were quickly and politely asked to QSY. However, I wonder what the Coast Guard stations thought about the hams who called CQ or tuned on frequency. This situation should serve as a reminder to all of us to listen first and then ask if the frequency is clear. That weak CW signal you heard in the phone band could be a call for help. No Amateur radio operator can treat such a call as a hoax. The responsibility for determining the status of any call for help can only lie with the proper authorities. □

hr REPORT

An FCC petition to clear away most of the existing restrictions holding back the development and use of new modulations forms, RM-3272, may be coming back to life. The petition has been associated with Docket 20777, which was originally the bandwidth docket, and since last fall has been for all intents and purposes an ASCII docket. With RM-3272 associated with it, the bandwidth rules come back to life, but without chasing AM off 80 and 160, and without the requirement to measure transmitter bandwidths.

The FCC staff is now preparing some alternatives for Commission action, and the likeliest result is a new Notice of Inquiry or a Notice of Proposed Rule Making. AB1Z, Minuteman Repeater Association.

hr Report, August 3, 1979

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First 432 MHz Hawaii to mainland U.S. contact was made July 17, when KH6HME worked WB6NMT at 0517 on SSB. Three more stations, W6YDF, WB6ESQ, and WB6WLR, all made the grade during the next hour, with signals generally well above the noise level.

KH6HME's beacon was actually heard much earlier in the evening, but it took some time to alert Paul and for him to arrive at the station site 8200 feet up on Mauna Loa. His beacon was heard from southern California to north of San Francisco, and W6XT heard it again last Sunday night. Thanks W6NGN.

hr Report, July 27, 1979

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Canal Zone will cease to be a separate country at the end of September, under the recent U.S./Panama treaty. After that, all KZ5's will have to qualify for an HP1 license to stay on the air.

hr Report, July 6, 1979□

Hereabouts...

Congratulations to Wing Choy, KA1BHZ, on his recent upgrading to technician class! □

Events

The 1979 New England Division ARRL Convention will be held on September 29 and 30 at the Sheraton-Hartford in downtown Hartford, Connecticut. Hope to see you there! □

WARS MEMBERSHIP ROSTER AS OF AUGUST 18, 1979

Adlerstein, Evelyn WB1CTZ	24 Bobolink Rd., Wellesley, Ma. 02181	235 1130	T
Adlerstein, Michael, K1FB	24 Bobolink Rd., Wellesley, Ma. 02181	235 1130	E
Allen, John, K1FWF	44 Walnut St., Hudson, Ma. 01749	562 3045	E
Alman, Hal, WN1TKD	2 Meryl St., Medway, Ma. 02053	533 8904	A
Anderson, Nels, K1UR	32 Westgate Rd., Chestnut Hill, Ma. 02167	323 5029	E
Andrews, George E. WB1FEE	291 Nehoiden St., Needham, Ma. 02192	444 3808	G
Arnold, Bob, WD4AOH	390 Furman Lane, Ladson, N.C. 29456		G
Behrens, Gene, N1AFI	64 Pine St., Medfield, Ma. 02052	359 4240	A
Belasco, Steven, WA3CPK	20 Ridge Rd., Waban, Ma. 02168	332 3082	T
Bettinelli, Bernard, WA1YXB	62 Holworthy St., Cambridge, Ma. 02138	876 2318	N
Bettinelli, Bern III WA1ZMD	62 Holworthy St., Cambridge, Ma. 02138	876 2318	G
Bond, Norris, WA1WKR	124 Benvenue St., Wellesley, Ma. 02181	235 9226	N
Borrow, Joe, K1GFH	38 Jarvis Circle, Needham, Ma. 02192	449 2540	G
Brack, Fred N3AMR	14 Redding Ridge Dr., Gaithersburg Md 20760		G
Bradley, Peter N1ADX	200 E. Main St., Westboro, Ma. 01581	366 2511	G
Brewer, Frank WB1GCU	P.O. Box 249, Dover, Ma. 02030	785 0015	N
Brodie, Glenn N1ACN	206 Boston Post Rd., Sudbury, Ma. 01776	443 8677	G
Brodie, Nina WB1ECJ	206 Boston Post Rd., Sudbury, Ma. 01776	443 8677	T
Broeg, Phil W1HBB	9 Woodside Lane, Burlington, Ma.,01803	272 7612	G
Brown, Howard J. Jr. K1VFY	30 Greystone Rd., Dover, Ma. 02030	785 1999	G
Burtman, Harry WB1ANM	58 Union St., Stoughton, Ma., 02072	344 1885	G
Burton, Thomas M. KA1DHM	61 Whittier Rd., Wellesley Hills, Ma. 02181	235 6353	N
Callahan, Frank WB1GKU	3 Hobbs Brook Rd., Weston, Ma. 02193	894 3407	N
Caramanica, Brian WB1ALT	80 Fiske Ave., Waltham, Ma. 02154	899 8014	N
Cayon, Denise, WB1ECA	71 Walsh St., Medford, Ma. 02155	395 0813	T
Chabot, Charles WA1GBF	11 Trinity Court, Wellesley, Ma. 02181	235 1012	T
Chapman, John WA1WER	5 Brook Rd., Dover, Ma. 02030	785 1396	G
Chesley, Donald WA1HVS	5 Pine Ridge Rd., Natick Ma. 01760	655 5211	A
Chesley, Luella WB1BYK	5 Pine Ridge Rd., Natick Ma. 01760	655 5211	N
Chesley, Cheryl WA1TAL	5 Pine Ridge Rd., Natick Ma. 01760	655 5211	N
Chick, Howard WB1ECG	648 W. Central St., Franklin, Ma. 02038	528 1987	N
Choy, Wing S., KA1BHZ	197 Chiswick Rd., Brighton, Ma. 02135	254 4675	T
Cohan, Morton WB2SBW	c/o Teradyne, 183 Essex St., Boston 02111	482 2700	T
Corio, Mark KA1DHQ	30 Highland St., Marlboro, Ma. 01752	481 8122	N
Curry, David K1TK	Box 1149, W.P.I., Worcester, Ma. 01609	237 2450	E
DeCicco, Tony WB1BUS	22 Sawin St., Watertown, Ma. 02172	491 1554	A
Del Signore, Larry	100 Sawyer Ave., Dorchester, Ma. 02125	282 6231	
Dick, Ray WA1DPX	84 Fontaine St., Marlborough, Ma. 01752	481 3290	G
Dinman, Mark WB1FCQ	27 Alden Rd., Wayland, Ma. 01778	358 2519	G
Dinman, Saul K1PDX	27 Alden Rd., Wayland, Ma. 01778	358 2519	A
Downing, William WA1PQY	90 Arnold Rd., Wellesley, Ma. 02181	235 4484	G
Eddy, Chan WA1YOL	145 Randolph St., Abington, Ma. 02351	878 1733	A
Fasolino, Ludwig K1LF	34 Pine Plain Rd., Wellesley, Ma. 02181	237 0316	E
Ferris, Frank W4TYZ	120 Williams Terrace, Warner Robins, Ga. 31093	923 4492	A
Fitzpatrick, Al KA1CHS	28 Esten Rd., Stoughton, Ma. 02072	344 7489	N
Fusco, Tony WB1FTD	69 Mallard Way, Waltham, Ma. 02154	893 3398	G
Gallagher, Edward	87 Beaufort Ave., Needham, Ma. 02192	449 1718	N
Garfield, Joseph WB1BUZ	Doppingbrook Rd., Sherborn, Ma. 01770	655 6033	T
Garfield, Frances WB1BVA	Doppingbrook Rd., Sherborn, Ma. 01770	655 6033	A
Geffen, Robert	43 Pilgrim Rd., Natick, Ma. 01760	653 6877	
Getter, Carl W1MIJ	58 Felch Rd., Natick, Ma. 01760	655 0142	A
Goldman, David W1YSW	26 Priscilla Circle, Wellesley, Ma. 02181	235 6259	G
Graf, Albert W1OQP	391 Worcester Rd., Wellesley, Ma. 02181	235 1538	A
Gruber, Ted, WB1ECE	11 Eliot Circle, Ashland, Ma. 01721	881 3786	A
Halcrow, William KA1AJK	Sutton Ave., Oxford, Ma. 01540	987 0471	N

Hanlon, William N1ADY	49	Vine St., Wrentham, Ma. 02093	384 8056	A
Hanlon, Sally	49	Vine St., Wrentham, Ma. 02093	384 8056	
Hatherley, James WA1TBY	46	Hobson St., Brighton, Ma. 02135	254 6042	A
Hayes, Hamilton WB1GUZ	21	Shaw Farm Rd., Holliston, Ma. 01746	429 6315	G
Heine, Laurence WB1FCW	264	Washington St., Wellesley, Ma. 02181	235 1120	N
Heine, Madeline WB1FCX	264	Washington St., Wellesley, Ma. 02181	485 4253	N
Jacobson, Alan WB1ELD	64	McLean St., Wellesley, Ma. 02181	237 0553	T
Jacobson, Donald WA1ZXR	64	McLean St., Wellesley, Ma. 02181	237 0553	N
Jansen, Louis W1FL	4925	Washington St., W. Roxbury, Ma. 02132	327 3646	E
Jansson, Edward WD4DTC	1130	Willowbrook Trail, Maitland Fl. 32751		A
Johnson, Chad N1ABZ	90	Hundreds Rd., Wellesley, Ma. 02181	235 5114	G
Kamitian, Jid W1OJN	93	Orchard Lane, Holliston, Ma. 01746	429 6867	A
Keady, John F. SR.	13	Ferndale Rd., Natick, Ma. 01760	653 2068	
Kelly, Kevin WA1YHV	7	Lawnwood Place, Charlestown, Ma. 02129	242 0341	E
Kent, David N2AWG		W.P.I. Box 2262, Worcester, Ma. 01609		G
Kirschen, David WA1ZRH	8	Westview Rd., Framingham, Ma. 01701	877 1497	A
Knight, George	117	Fairfield St., Needham, Ma. 02192	449 0298	
Kuong, Allan WA1SCS		P.O. Box 151, Wellesley, Ma. 02181	235 5446	G
Langermann, Tzvi WB1BUW	86	Greenough St., Brookline, Ma. 02146	566 6549	N
Lazewatsky, Joel WA1ZTB	33	Bishop Dr., Framingham, Ma. 01701		G
Lebow, Joel H.	73	Mackintosh Ave., Needham, Ma. 02192	444 4759	
Lenk, Walter K1YTY	22	Priscilla Circle, Wellesley, Ma. 02181	237 9289	G
Levin, Scott WB1FGI	89	Loker St., Wayland, Ma. 01778	358 7234	N
Levin, Theodore WB1CFC	8101	Sunrise Lakes Dr #307, Sunrise, Fl 33322	742 6453	G
Levine, Carlisle WB1ECK	1921	Commonwealth Ave., Auburndale, Ma. 02166	244 3818	A
Lipson, Neil K1NDF	51	Pratt Dr., W. Newton, Ma. 02165	527 7731	A
Loring, Edward KA1CJE	18	Thomas Rd., Wellesley, Ma. 02181	235 6695	N
MacDonald, Samuel	29	Hastings Rd., Belmont, Ma. 02178	484 2604	
MacKay, Dale WB1BUT	15	Maple Rd., Wellesley, Ma. 02181	235 9541	N
Manti, Richard WB1BUQ	80	Kingsbury St., Wellesley, Ma. 02181	235 6371	E
McDade, Harry W1LMU	194	Winslow Rd., Waban, Ma. 02168	527 4269	A
McDonald, C. J. WB1BUM	48	Hale St., Newton, Ma. 02164	332 6091	T
McDonald, Dennis WB1EBW	48	Hale St., Newton, Ma. 02164	332 6091	N
McGrath, Joseph WA1JIR	143	Hayden Row St., Hopkinton, Ma. 01748	435 6893	A
McNair, Kenneth KA1ACX	105	Blake St., Needham, Ma. 02192	444 5317	N
McNamara, Timothy WA1YHU		Chestnut St., Millville, Ma.01529	883 6128	N
Murphy, Jim WB1BUR	45	Eliot Rd., Revere, Ma. 02151	289 0769	A
Nacey, Scott WA1YOJ	69	Forest St., Wellesley, Ma. 02181	235 1599	A
O'Brien, John KA1BDE	330	Coney St., Walpole, Ma. 02032	769 3796	N
O'Connor, James W1MIC	84	Prince St, Needham, Ma. 02192	449 1936	A
Opalka, William WB1ECB	130	Avon St., Malden, Ma. 02148	324 5144	G
Paret, Richard WA1ZLQ	35	Phillips Ave., Norwood, Ma. 02062	762 5074	T
Pavone, Edward WB1ECR	61	Hawthorne St., Belmont, Ma. 02178	484 5659	E
Puente, Mauricio, WB1DZX	11	Blake Rd., Newtonville, Ma. 02160	244 1577	N
Reed, Scott KA1ADB	17	Yurick Rd., Needham, Ma. 02192	444 4924	N
Rehbein, Roy AD1M	1	Cutler St., Hopedale, Ma. 01747	473 9610	E
Rehbein, Scott WB1GZE	1	Cutler St., Hopedale, Ma. 01747	473 9610	G
Reynolds, Charles Jr. KA1AXW	33	Washington Park, Newton, Ma. 02160	527 6714	T
Riley, Thomas WB1BUN	50	Hale St., Newton, Ma. 02164	244 3239	N
Ring, Jordan K1UN	16	White Pine Rd., Needham, Ma. 02192	444 7464	E
Robertson, Ted WB1ECL	28A	Cherry St., Somerville, Ma. 02144	666 9378	A
Rudko, Bob W1HSS	4	Short Rd., Holliston, Ma. 01746	429 4082	G
Rudnick, Karen	39	Sanderson Rd., Lexington, Ma. 02173	862 4533	
Rudnick, Leslie KA1BTX	39	Sanderson Rd., Lexington, Ma. 02173	862 4533	N

Ruggiero, Richard WA1ZLN	11	Avon St., Natick, Ma. 01760	655 1928	T
Savenor, Joe	15	Meredith Circle, Needham, Ma. 02192	449 1160	
Schermerhorn, 'Skid' W1TTY	11	Chestnut St., Wellesley, Ma. 02181	235 1987	A
Schide, John WB1BUV	5	Hudson Rd., Natick, Ma. 01760	653 0692	G
Shoop, Ray N1CW	98	Bigelow St., Marlboro, Ma. 01752	481 6305	E
Sline, George WB1BVB	395	Weston Rd., Wellesley, Ma. 02181	235 5244	N
Smith, David K1BSO	35	Kingswood Rd., Auburndale, Ma. 02166	965 2463	E
Smith, Karen WB1FGN	55	Singletree Rd., Chestnut Hill, Ma. 02167	232 5646	G
Smith, Phillip WB1FGJ	55	Singletree Rd., Chestnut Hill, Ma. 02167	232 5646	G
Smith, Roger W1EOA	7	Berkeley Rd., Wellesley, Ma. 02181	235 6239	E
Smith, Sol W1HNN	75	Grove St., Wellesley, Ma. 02181	237 9120	A
Spaulding, Les WA1ZTO	14	Madison Ave, Newton, Ma. 02160		G
Stevens, Charles KA1DHV	249	Main St., Cochituate, Ma. 01778	653 8421	N
Tannozzini, Dave K1ZQW	12	Clearwater Rd., Newton, Ma. 02164	964 0722	G
Taricano, Michael N1AGK	21	Nathan Rd., Newton Ctr., Ma. 02159	244 1906	A
Thoresen, Erik K1OGF	28	Lookout Ave., Natick, Ma. 01760	653 1216	T
Turell, John WA1ZLO	18	Cleveland Rd., Wellesley, Ma. 02181	235 6742	G
Vaccaro, Dennis WA1WLX	57	Avon Rd., Wellesley, Ma. 02181	235 2542	A
Vartanian, Matthew AC1D	10	Carpenter Rd., Wayland, Ma. 01778	655 1562	E
Vartanian, Sarkis WA1WDG	10	Carpenter Rd., Wayland, Ma. 01778	655 1562	N
Vasil, Bruno WB1AJA	58	Bradeen St., Roslindale, Ma. 02131	327 0981	G
Vasil, Bruno Jr. WB1ACF	58	Bradeen St., Roslindale, Ma. 02131	327 0981	N
Veznaian, Kenneth WB1FCY	185	Fellsway West, Medford, Ma. 02155	395 5959	A
Waugh, Andrew WB1BVE	20	Bernard Rd., Wellesley, Ma. 02181	237 9856	N
Waugh, Peter WB1BVD	20	Bernard Rd., Wellesley, Ma. 02181	237 9856	N
Waugh, Stanley WB1BVC	20	Bernard Rd., Wellesley, Ma. 02181	237 9856	N
Weissel, Richard WA1HRV	39	MacArthur Rd., Natick, Ma. 01760	655 2366	A
Whitman, Howard	44	Elm St., Wellesley, Ma. 02181	235 9308	
Wiles, Chris WA1RGA	32	Westgate Rd., Chestnut Hill, Ma. 02167	235 9095	A
Wilmarth, Roger WA1RSV	10	Roberts Rd., Wellesley, Ma. 02181	235 6783	G
Woodbury, Robert K1ZL	12	Meadowbrook Rd., Dover, Ma. 02030	785 1423	E
Woods, Farrell WB1ELQ	231	Mossman Rd., Sudbury, Ma. 01776		G
Wortman, Denys WB1ECX	168	Bishop Drive, Framingham, Ma. 01701	873 9583	N
Young, George WA1YAU	525	Worcester Rd., Wellesley, Ma. 02181	237 2082	G
Young, Robert D. W1MXI	83	Oak Ave., Belmont, Ma. 02178	484 0950	G

If there are any additions or deletions, changes in call signs, upgrade in your ticket etc., please notify Jim Hatherley, WA1TBY so proper information can be put into the records.